

## **INDIA**

Prepared January 2001

1. **Per USCINCPACINST 6200.2:** Commanders are responsible for an effective Force Health Protection Plan for personnel deploying to locations within the USCP AOR, ensuring implementation of the Plan, for appointing a FHP Officer and assistant who will serve as the Commander's focal point for the planning, coordination, and execution of "real world" force health protection planning for a specific deployment. This is applicable to all assigned and attached personnel, all Department of Defense personnel performing official duties within locations in the AOR, and all U.S. contractor personnel employed directly by the DOD in locations in the AOR.

2. **FHP Planning must include the following elements:**

a. **Health Threat Assessment.** This assessment must evaluate known and anticipated health threats/hazards (including endemic diseases, injuries, industrial toxins, and climatic extremes) and the appropriate countermeasures to be taken for each. The standards of medical facilities vary and may be below U.S. standards, particularly in remote areas.

Crime is a serious concern in India.

The following diseases are important causes of diseases:

**Insect-borne illness:**

Malaria, leishmaniasis and filariasis are prevalent. Dengue fever and dengue hemorrhagic fever, Japanese encephalitis, plague and other diseases occur.

**Food-borne and water-borne illness:**

Food-borne and water-borne illness are common throughout the area, in particular cholera and other watery diarrheas, the dysenteries, typhoid fever, viral hepatitis, and helminthic (parasitic worm) infections.

**Other illnesses:**

Brucellosis, trachoma, leptospirosis, dracunculiasis, echinococcosis and meningococcal meningitis occur. Diseases such as measles and diphtheria are common and cases of polio still occur regularly. Influenza risk extends throughout the year. Rabies in animals is a hazard in most areas.

b. **Health Record and Readiness Screening.** Performed prior to deployment. Items identified for screening include: immunizations, HIV testing, TB skin testing, DNA sample on file, current physical exam, dental class I or II,

prescription medications on hand, extra pair of eye glasses, and unresolved health problems (i.e., P-4 profile, limited duty, pregnancy, mental health, etc.) which could disqualify the Service member for deployment.

c. **Updated immunization record:** Service members should have a copy of the updated immunization record.

d. **Health Threat Briefing.** Must be performed prior to deployment. Attendance must be documented. Minimum contents of a Health Threat Briefing for India include the following material:

(1) **Immunizations.**

(a) **Routine immunizations:** All routine immunizations must be up to date for personnel on deployable or mobility status (tetanus booster, Hepatitis A, typhoid, MMR, polio, influenza, yellow fever)

(b) **Current influenza vaccine.** Even if local flu season is past and new vaccine is not available yet.

(c) **Special immunizations:** Japanese encephalitis. Japanese encephalitis vaccine is generally recommended for personnel deploying to field conditions anywhere in India. However, JE risk varies by region and season throughout India. Transmission period is July-December in North India and September-December in Andhra Pradesh. Transmission periods in South India are May-October in Goa; October-January in Tamil Nadu; August-December in Karnataka (with a second April-June peak in Mandya district). Urban cases occur. No cases reported in Arunachal, Dadra, Daman, Diu, Gujarat, Himachal, Jammu, Kashmir, Lakshadweep, Maghalaya, Nagar Haveli, Orissa, Punjab, Rajasthan and Sikkim. Mosquito vector is the Culex spp. (nighttime feeders-dusk to dawn).

(d) Yellow Fever vaccination certificate is required if coming from a Yellow Fever infected area.

(e) Cholera. Although cholera is present in India, immunization is not required.

(2) **Chemoprophylaxis**

(a) **Malaria chemoprophylaxis**

Risk exists throughout the year in the whole country including all major urban areas (includes Delhi, Bombay, Madras, Calcutta). Exceptions are portions of Himachal Pradesh, Jammu, Kashmir, and Sikkim above 6,600 feet (2,000 meters). In addition to DEET and permethrin-treated BDU/uniform, chemoprophylaxis is recommended.

Medicines that protect against malaria in this area include mefloquine (Lariam), and doxycycline. Each has potential side effects and may be inappropriate for some people.

(b) **Recommended regimen:**

Doxycycline 100 mg PO QD, beginning 2 days before potential exposure, until 28 days after, AND Primaquine phosphate 15 mg PO QD for 14 days beginning the day of departure from the malarious area (ensure normal G6PD level prior to initiation). Primaquine must be completed before stopping Doxycycline.

Alternative regimen is Mefloquine 250 mg PO once a week, beginning 2 weeks pre-exposure through 4 weeks post-exposure, plus terminal Primaquine as above. Mefloquine is not recommended for flyers.

**(3) Tuberculosis:** Tuberculosis is highly endemic throughout the country. All service members should have a PPD done (results must be recorded) within twelve months prior to deploying. A follow-up PPD should be done approximately 3 months after returning.

**(4) Personal Protective Measures .**

The most important personal protective measures against insect-borne diseases (malaria, dengue, Japanese encephalitis) are avoiding vector exposure as much as possible, and using appropriate insect repellent and properly worn permethrin-treated BDU or other treatable long-sleeve uniform.

- (a) **Avoid exposure to mosquitoes, if possible.** Anopheles (malaria) and Culex (Japanese encephalitis) species of mosquitoes are primarily rural dwelling, nighttime feeders (dusk to dawn). Aedes spp. (dengue) are primarily daytime feeders, and both urban and rural dwellers (indoors/outdoors).
- (b) **33% extended-duration DEET** (NSN 6840-01-284-3982) or an equivalent should be applied to all exposed skin surfaces 30 minutes before potential exposure and should be reapplied every four to six hours, especially if there is significant sweating. When using both DEET and sunscreen, DEET should be applied approximately 30 minutes before the sunscreen. Be aware that the effectiveness of the sunscreen will be decreased by approximately 35% due to the inactivating effects of the DEET. For that reason, sunscreen with SPF 45 is recommended. Sunscreen should not be applied first since that may decrease the effectiveness of the DEET

- (c) **Permethrin treatment of uniforms and bed nets** before departure (preferably with permethrin concentrate/compressed air sprayer technique, which lasts the life of the uniform).
- (d) **Sleep under a permethrin-treated bed net** with the edges tucked in under the bedding all around if not staying in US-sponsored air-conditioned quarters.

**(5) Safe Food and Water.**

- (a) Wash hands before eating.
  - (b) If available consume only approved food and water.
- Otherwise:
- (c) Eat piping hot, freshly cooked food from reputable sources.
  - (d) Eat no salads or fresh fruit/vegetables (except intact fruit which you wash and open yourself)
  - (e) Eat no food from street vendors or stalls
  - (f) Drink bottled or canned water/beverages only without ice cubes

**(6) Sexually transmitted diseases.** STDs are found in every area in the world and can be serious or FATAL (e.g., HIV, gonorrhea, hepatitis B).

- (a) Abstinence is the only perfectly safe practice and is recommended.
- (b) Barrier protection with latex condoms is the only other acceptable option (but can be just as dangerous in case of breakage).

**(7) Motor Vehicle and General Safety.**

- (a) **Motor vehicle accidents** pose a great health risk for travelers. Seat belts and extreme caution in and around vehicles must be practiced.
- (b) **General safety.** Exercise caution in ALL activities to avoid injury of any type. If you are seriously injured, there may be no option other than medical care in a facility where sterility of equipment and safety of blood products are far below those in the U.S.

**(8) Environmental Factors.**

- (a) **Heat injury.** Climate is very hot and humid, making injuries such as heat exhaustion and heat stroke more likely. Factors that increase heat injury risk include: alcohol consumption, skin trauma, diarrhea, certain medications, and poor physical conditioning. Necessary precautions include drinking water and other fluids frequently, on a schedule, to avoid dehydration;

adhering to safe work-rest cycles during extreme conditions; and careful observation of teammates to detect warning signs of heat injury such as mental status changes and cessation of sweating.

b) **Sun injury.** Sun exposure can be intense. Sun glasses, wide-brimmed hats, long sleeves and trousers, and liberal use of sunscreen (SPF 30 or greater) and lip balm are recommended precautions. Sunscreen should be applied to all sun-exposed skin (especially if taking Doxycycline) approximately 30 minutes after applying DEET.

(c) **Environmental and industrial pollution.** This can be significant, especially in the larger cities. Personnel with underlying respiratory conditions, such as asthma, may experience difficulty.

#### **(9) Hazardous Plants and Animals.**

(a) **Animal bites:** Rabies in animals is a hazard in most areas. Animal bites of any type should be thoroughly cleansed with soap and water and evaluated by a competent healthcare provider.

(b) **Snakes.** There are numerous poisonous snakes in India; some are aggressive. It is important to avoid all interactions with snakes, as some have extremely toxic venoms and antivenin may not be readily available. First aid for snake bites:

- Have the victim lie down and rest quietly;
- Immobilize the affected part by splinting it as if it were fractured and keep it lower than the heart;
- Remove all jewelry (including from unaffected limbs);
- Arrange for urgent medevac to a medical treatment facility.
- NO ONE SHOULD ATTEMPT TO KILL OR CATCH THE SNAKE (dead snakes and severed heads have been known to bite up to several hours post-mortum)

**(10) Personal Health and Fitness.** Try as much as possible to maintain a healthful regimen of hygiene and fitness. Regular bathing and frequent changes of undergarments, including socks, are important. When exercising outdoors, be aware that shorts and tank tops will make you more susceptible to diseases carried by mosquitoes and other insects. Apply DEET repellent to exposed skin prior to exercising outdoors.

**(11) Other comments.** India is an economically developing

democratic republic. There are many areas subject to political unrest and acts of violence or terrorism. Obtain the latest State Department advisory and Consular Information Sheet prior to travel at <http://travel.state.gov>).

**(12) Assistance** with Health Threat Assessments, Health Threat Briefings, and countermeasures planning can be obtained from the following sources:

a. Health Promotion and Preventive Medicine Department, Tripler Army Medical Center, phone (DSN or 808)433-6693

b. Pacific Air Forces Public Health Officer, Hickam Air Force Base, phone (DSN or 808)449-2332, x269

c. Epidemiology Department, Navy Environmental and Preventive Medicine Unit 6, phone (DSN or 808)473-0555; email: [epi@nepmu6.med.navy.mil](mailto:epi@nepmu6.med.navy.mil)